



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/634,040	08/01/2003	John C. Dahlheimer	02-0020	5282

29293 7590 11/30/2004

FREUDENBERG-NOK GENERAL PARTNERSHIP
INTELLECTUAL PROPERTY DEPT.
47690 EAST ANCHOR COURT
PLYMOUTH, MI 48170-2455

EXAMINER

PICKARD, ALISON K

ART UNIT	PAPER NUMBER
----------	--------------

3676

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/634,040

Applicant(s)

DAHLHEIMER, JOHN C.

Examiner

Alison K. Pickard

Art Unit

3676



– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: ____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 12-14, 18, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Dickie (5,813,674).

Dickie discloses a face seal assembly comprising a seal case 32 with a radial end wall 48 and an axial neck 52. A seal ring 34 is located radially outward of the neck and rotationally fixed relative to the case. The ring has an inward facing surface with a bore 82 and a sealing surface 22. A seal seat 42 is mounted against the sealing surface and is rotatable relative to the ring 34. A primary spring 38 is mounted between the end wall and ring. A secondary seal 86 has a PTFE portion and a secondary seal spring 96. The secondary seal 86 is between the bore and the neck with an interference fit (col. 5, lines 34-35). The case includes an outer case wall 44 extending in an axial direction with plural teeth 44 that are interleaved with teeth 66 on the seal ring to prevent rotation. A washer is between the spring 38 and ring 34. A sleeve 12 is fixed to the seal seat 42. The secondary seal spring is u-shaped with lips 92 and 94, which extend toward the high pressure.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
-

Art Unit: 3676

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-5 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hintenlang (5,964,466) in view of Dickie.

Hintenlang discloses a face seal assembly comprising a seal case having radial wall 7 and axial neck 5. A seal ring 1 is fixed with respect to the case and outward of the neck. A primary spring 8 biases the seal ring sealing surface against a seal seat 4. The seal seat includes a sleeve 19 fixed to the seat and a grommet 17 between the sleeve and seat. Hintenlang does not disclose a secondary seal with a PTFE portion and second spring within a bore in the seal ring. Dickie teaches an improved face seal assembly under varying pressures. Dickie teaches forming the assembly with a secondary seal in a bore of a seal ring. The secondary seal comprises PTFE for durability and a secondary spring to maintain sealing engagement even under high pressure. Dickie also teaches the use of teeth on the case and seal ring to prevent rotation. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the assembly of Hintenlang with the secondary spring and teeth of Dickie to improve the sealing ability under a range of pressures.

5. Claims 6-11, 15-17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dickie.

Dickie does not disclose the materials or surface finish required by the claims. The selection of a known material based on its suitability for its intended use is not considered inventive. See *In re Leshin*, 125 USPQ 416 (CCPA 1960). Also, it is not considered inventive to discover the workable or optimum ranges by routine experimentation. See *In re Aller*, 105

USPQ 233, 235 (CCPA 1955). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to make the washer, case, secondary seal, seal ring, and seal seat from the claimed materials and to make the neck with a surface finish in the required range as a matter of choice in design.


Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alison K. Pickard whose telephone number is 703-305-0882. The examiner can normally be reached on M-F (10-7:30), with alternate Friday's off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Swann can be reached on 703-306-4115. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Alison K. Pickard
Primary Examiner
Art Unit 3676